



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **102015-003** Project Number: 2015-05-081
Installation Number: 510-0179

Parent Company: Italgrani USA

Parent Company Address: 7900 Van Buren, St. Louis, MO 63111

Installation Name: Italgrani Elevator/US Durum Milling

Installation Address: 7900 Van Buren, St. Louis, MO 63111

Location Information: City of St. Louis

Application for Authority to Construct was made for:

Installation of a new debranning process. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

S. Heckenkamp for
Prepared by
Chia-Wei Young
New Source Review Unit

Kyra L. Moore
Director or Designee
Department of Natural Resources

OCT - 7 2015

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources' regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Italgrani Elevator/US Durum Milling
City of St. Louis

1. Control Device Requirement- Cyclones and Baghouses
 - A. Italgrani Elevator/US Durum Milling shall control emissions from the internal handling equipment (three chain conveyors, one bucket elevator, EP-30) and the five (5) debranning machines (EP-31) using a cyclone followed by a baghouse as specified in the permit application.
 - B. Italgrani Elevator/US Durum Milling shall control emissions from the two (2) coolers/aspirators (EP-32) using a baghouse as specified in the permit application.
 - C. The cyclones and baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
 - D. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - E. Italgrani Elevator/US Durum Milling shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours when in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - F. Italgrani Elevator/US Durum Milling shall maintain a copy of the cyclone and baghouse manufacturer's performance warranties on site.
 - G. Italgrani Elevator/US Durum Milling shall maintain an operating and maintenance log for the cyclones and baghouses which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

2. Capture Requirement – Enclosure
 - A. All equipment of the debranning process (i.e. chain conveyors, bucket elevator, debranning machines, and coolers/aspirators) shall be completely enclosed and be maintained under negative pressure.
 - B. Italgrani Elevator/US Durum Milling shall demonstrate negative pressure at all emission unit openings (e.g. head boxes, drop point openings, etc) that are not closed during normal operations by using visual indicators such as streamers, talc puff test, negative pressure gauges, flags, etc.
 - C. All visual indicators shall be observed once per day while the equipment is in operation and results noted in a log.
3. Operating Permit Requirements
 - A. Italgrani Elevator/US Durum Milling shall calculate the potential emissions of the entire installation and submit it as part of its update to its current Intermediate Operating Permit Renewal application (Project 2007-12-014) within 180 days after permit issuance.
 - B. The 180 day timeframe from Special Condition 3.A. may be extended if Italgrani Elevator/US Durum Milling submits a written request at least fourteen (14) days before the deadline to the Compliance/Enforcement Unit of the Missouri Air Pollution Control Program for approval.
4. Record Keeping and Reporting Requirements
 - A. Italgrani Elevator/US Durum Milling shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include SDS for all materials used.
 - B. Italgrani Elevator/US Durum Milling shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2015-05-081
Installation ID Number: 510-0179
Permit Number:

Installation Address:

Italgrani Elevator/US Durum Milling
7900 Van Buren
St. Louis, MO 63111

Parent Company:

Italgrani Elevator/US Durum Milling
7900 Van Buren
St. Louis, MO 63111

REVIEW SUMMARY

- Italgrani Elevator/US Durum Milling has applied for authority to install a new debranning process.
- The application was deemed complete on May 27, 2015.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR 60, Subpart DD, *Standards of Performance for Grain Elevators*, of the New Source Performance Standards (NSPS) applies to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Cyclones and baghouses are being used to control the particulate emissions from the chain conveyors and the debranning machines. A baghouse is being used to control the particulate emissions from the coolers/aspirators.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are less than the de minimis level.
- This installation is located in the City of St. Louis, a non- attainment area for the 1997 8-hour ozone, 1997 PM_{2.5}, and 2008 8-hour ozone standards and an attainment area for all other pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. It is category 27, any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act. The facility is subject to NSPS Subpart DD, which was promulgated prior to August 7, 1980. The installation's major source level is 250 tons per year for attainment pollutants, but fugitive emissions are counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment as a condition of this permit.
- An update to the facility's intermediate permit application is required for this installation within 180 days after permit issuance.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Italgrani USA owns and operates a 4 million bushel grain elevator (known as Italgrani Elevator) and a single line durum wheat mill (known as US Durum Milling). Italgrani elevator has a production limit of 1,500,000 tons per year while US Durum Milling has a production limit of 600,000 tons per year, both set in the 1997 operating permit (OP97028). In its Intermediate Operating Permit renewal application, the facility asked to eliminate the production limits and to take an 100 tons per year PM₁₀ limit instead. The renewal application is currently being review by the Air Pollution Control Program under project number 2007-12-014.

Currently, it cannot be confirmed whether the facility is a minor source or major source for construction permits or if the facility is a Basic, Intermediate, or Part 70 source for operating permits. No reliable installation-wide emissions calculations are available. Emissions calculations included in previous permits were performed years ago with emission factors that may not be currently applicable. It is also not known if these calculations included all of the emission units at the facility. Therefore, the facility is required to submit a new installation-wide emissions calculation within 180 days of permit issuance as an update to its Intermediate operating permit to confirm its major/minor source status.

The following New Source Review permits have been issued to Italgrani Elevator/US Durum Milling from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Date	Description
None Assigned	4/23/1992	Loading spouts
None Assigned	2/11/1993	Truck grain loading
CC48-94	12/9/1994	Cold cleaner/parts washer
95-03-033	3/27/1995	Diesel storage tank
96-08-064	12/9/1996	Railcar vacuum system for semolina flour
97-05-045	11/7/1997	Increase throughput of a truck loading spout
04-02-005	3/19/2004	Correcting the maximum hourly design rate for a truck loading chute.
06-03-006	5/10/2006	Change in fumigation chemicals
08-01-001	7/7/2008	Flour storage tanks with conveyors

Note 1: The facility was issued a Source Registration Permit No. 97-03-021 for additional pickup points. However, source registration permits are not considered new source review permits and are not federally enforceable.

PROJECT DESCRIPTION

Italgrani Elevator/US Durum Milling proposes to install a new 2nd stage debranning process, which consists of 3 chain conveyors (EP-30), 1 bucket elevator (EP-30), 5 debranning machines (EP-31), and 2 coolers/aspirators (EP-32). The debranning machine removes a small percentage of the bran from the kernel. After debranning, the wheat goes to the coolers and to the mill to be ground.

The maximum hourly design rate of the debranning process is 55 tons per hour. The addition of this process will not debottleneck the mill. The internal handling equipment (EP-30) will be vented to a decanter cyclone (either F-22 or F-23) followed by a baghouse (either F-24 or F-25). The debranning machines will be vented to a decanter cyclone (either F-22 or F-23) and vented to a baghouse (either F-24 or F-25). The coolers (EP-32) will be vented to a baghouse (F-26). There is no combustion equipment associated with the equipment.

EMISSIONS/CONTROLS EVALUATION

PM_{2.5}, PM₁₀ and PM emissions are expected from the equipment. For the internal handling equipment (e.g. conveyors and elevators), all particulate emissions were calculated using emission factors from EPA document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition, Section 9.9.1, *Grain Elevator and Processes*, May 2003. For the cooler/aspirator, PM emission factor was obtained from the EPA's on-line Factor Information Retrieval System (FIRE) under soybean cooling. PM₁₀ and PM_{2.5} emissions from the cooler/aspirator were calculated by assuming that 25% of the PM is PM₁₀ and that 17% of PM₁₀ is PM_{2.5}. The particle size distribution was taken from AP-42, Chapter 9.9.1.

PM emissions from the debranning machines were calculated using results from stack tests performed on debranning machines at American Italian Pasta. The stack test report from American Italian Pasta is currently being reviewed by the Compliance/Enforcement Unit of the Missouri Air Pollution Control Program for approval. American Italian Pasta is required, in Permit No. 102013-007, to perform the tests within 90% of the MHDR. If the tests are conducted below 90% of the MHDR (22.5 tph), then the tested production rate plus 10% is the new MHDR. However, the stack test report submitted by Italian American Pasta only listed the emissions in pounds per hour and did not include production information, so it cannot be confirmed that the facility performed the stack tests within 90% of the MHDR. In order to be conservative, it was assumed that the stack tests were performed at 50% of the MHDR (11.25 tph). American Italian Pasta also operates three stages of debranning and it was assumed conservatively that the emissions from all three stages are emitted by the debranning machines at Italgrani Elevator/US Durum Milling. The emissions data from the stack tests include the use of cyclone and elevator as control devices.

Capture efficiency of the control devices are assumed to be 100% since all equipment are completely enclosed and maintained under negative pressure. The facility shall demonstrate negative pressure at any emission unit openings that are not closed during

normal operations by using visual indicators such as streamers, talc puff test, negative pressure gauges, etc. For the use of the decanter cyclone, the control efficiency used for PM_{2.5}, PM₁₀, and PM are 10%, 35%, and 80%, respectively. The PM_{2.5} and PM₁₀ control efficiency are taken from AP-42, Appendix B.2. "Generalized Particle Size Distributions," while the PM control efficiency are taken from the EPA Air Pollution Control Technology Fact Sheet for cyclones. The baghouses were given a 99% control efficiency, which is the default value used by the Air Pollution Control Program.

The following table provides an emissions summary for this project. Existing potential emissions were not available as discussed in the installation description section. Existing actual emissions were taken from the installation's 2014 EIQ. Potential emissions of the application represent the potential of the new equipment assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2014 EIQ)	Potential Emissions of the Application	New Application Conditioned Potential
PM	25.0	N/D	N/D	5.40	N/A
PM ₁₀	15.0	N/D	29.57	2.17	N/A
PM _{2.5}	10.0	N/D	25.26	1.23	N/A
SO _x	40.0	N/D	0.0028	N/A	N/A
NO _x	40.0	N/D	0.47	N/A	N/A
VOC	40.0	N/D	1.87	N/A	N/A
CO	100.0	N/D	0.40	N/A	N/A
GHG (CO ₂ e)	100,000	N/D	N/D	N/A	N/A
GHG (mass)	250.0	N/D	N/D	N/A	N/A
HAPs	10.0/25.0	N/D	0.37	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are less than de minimis levels.

APPLICABLE REQUIREMENTS

Italgrani Elevator/US Durum Milling shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 26, 2015, received May 27, 2015, designating Italgrani Elevator/US Durum Milling as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs	National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SDS	Safety Data Sheet
GHG	Greenhouse Gas	SIC	Standard Industrial Classification
gpm	gallons per minute	SIP	State Implementation Plan
gr	grains	SMAL	Screening Model Action Levels
GWP	Global Warming Potential	SO_x	sulfur oxides
HAP	Hazardous Air Pollutant	SO₂	sulfur dioxide
hr	hour	tph	tons per hour
hp	horsepower	tpy	tons per year
lb	pound	VMT	vehicle miles traveled
lbs/hr	pounds per hour	VOC	Volatile Organic Compound
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Giovanni Zago
Director of Milling Operations
Italgrani Elevator/US Durum Milling
7900 Van Buren
St. Louis, MO 63111

RE: New Source Review Permit - Project Number: 2015-05-081

Dear Mr. Zago:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, Truman State Office Building, Jefferson City, Missouri 65102, website: www.oa.mo.gov/ahc. If you have questions regarding this permit, contact Chia-Wei Young, at the Department of Natural Resources' Air Pollution Control Program (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:cyl

Enclosures

c: St. Louis Regional Office
PAMS File: 2015-05-081
Permit Number: